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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,071	01/12/2006	Andreas Gottschalk	STERN24.001APC	7547

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EXAMINER
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JACOBS, TODD D

ART UNIT	PAPER NUMBER
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3746

NOTIFICATION DATE	DELIVERY MODE
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04/28/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/530,071	<b>Applicant(s)</b> GOTTSCHALK, ANDREAS	
	<b>Examiner</b> TODD D. JACOBS	<b>Art Unit</b> 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/16/2009 has been entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 claims that the shaft is "without a core shaft". Then, claim 2, which depends on claim 1, states, "the shaft has a thin continuous core region". These two limitations contradict each other. It is not clear to the examiner whether applicant's shaft has a core shaft or does not have a core shaft. Further, it is not clear how something can be made from a single piece of homogenous material and has a core region. Please note that claims 1 and 2 have been rejected using a second 103 rejection, but it is not clear what applicant is claiming.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-9, 11-13 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magnus 5,558,507 in view of Itabashi et al (5676192) or Nakamura et al (5778530) or Smith et al (6289764).

In re claims 1, 5-6, 11 and 16-18, 20 Magnus teaches a pumping apparatus with a peristaltic drive device for pumping a medium through a hose (4) having at least one compressible portion, containing a one-piece shaft (figure 3) with integral cams (7) arranged so as to be offset with respect to one another and with attached lamellae (2), the shaft being configured to guide movement of the lamellae in both forward and backward directions (since the lamellae are attached to the asymmetrically designed shaft, as the shaft turns from 0 degrees to 180 degrees, the lamellae are guided in a forward direction, and as the shaft turns from 180 degrees towards 360/0 degrees, the lamellae are guided in a backward direction), wherein the cams are cam segments, and wherein the shaft is without a core shaft (no solid shaft upon which the cam segments are mounted as shown in figure 5) and essentially without a continuous core region.

Magnus fails to teach that the one-piece shaft comprises a single homogenous piece of material. Smith et al, Nakamura et al and Itabashi et al all teach integrally cast cam shafts made of a homogenous piece of material. It would have been obvious to one of ordinary skill in the art at the time of the invention to have made the shaft and cams of Magnus from one-piece as taught by Smith et al, Nakamura et al and Itabashi et al as a design choice and since it has been held that making in one-piece which has formerly been multiple pieces is a matter of obvious engineering choice. In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965)

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In re claims 3-4 and 15, Magnus also teaches a counter pressure plate 6 for applying the hose, and for supporting the pressure exerted on the hose by the lamellae wherein the counter pressure plate is sprung within the housing of the apparatus by one ore more springs (column 4, lines 22-27), and also generating a sinusoidal pinching movement of the lamellae as clearly shown in figure 1.

In re claims 7-8 and 12-13, Magnus also suggests assembling the shaft structure in whatever structure is required for varying squeezing contours resulting in varying pumping rates and amounts (see column 4, lines 28-36). Also, Magnus fails to make explicit mention of that the cam segments are offset with respect to one another in such a way that only one cam segment is at a maximum distance from an imaginary line of the shaft and a uniform offset of the cam segments is provided. However, such a structure is a mere rearrangement of parts and it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70 and Magnus discusses rearranging the cams and structuring the eccentric shaft in a manner corresponding to a desired squeezing contour for the purpose of achieving a desired pumping rate and volume (see column 4, lines 28-36). In likewise fashion, the desire to pinch the hose so that a volume can be enclosed in leak-tight manner at the first and last cam segment and the remaining lamellae serve for the reduction in volume or wherein the first and last lamellae are switched as a valve and the remaining lamellae are set in such a way that in any position, at least a narrow gap remains between the walls of the hose acted upon by the lamellae results only in a mere rearrangements of parts. It has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70 and such a rearrangement is suggested by Magnus for the purpose of adjusting the desired squeezing contour and therefore, the desired pumping rate and volume (see column 4, lines 28-36).

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In re claim 9, see Magnus col. 1 lines 59-62.

In re claim 19, Magnus teaches the invention as claimed and teaches wherein the ratio of the lamellae height to the lamellae stroke ranges from *about* (emphasis added) is 4:1 to 1:1. Note that, and not discrediting the previous statement, Magnus does not fully disclose the ratio. It would have been obvious to one having ordinary skill in the art at the time the invention was made to reach such a ratio, since the claimed values are merely an optimum or workable range. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claims 1-2, 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magnus 5,558,507 in view of Itabashi et al (5676192) or Nakamura et al (5778530) or Smith et al (6289764) and further in view of Goi et al (5,263,830).

In re claims 1-2, 5-6, the limitations of claim 1 and 5 are met entirely by the references as discussed in the rejections above.

However, (with specific reference to claim 2 and meeting an 'or' clause for claim 5 (where there is a thin continuous core region)), Magnus, Itabashi, Nakamura and Smith all lack the teaching of a continuous core region. Goi et al teaches a continuous core region of a cam shaft. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have provided the cam shaft of Magnus as modified by either Smith, Nakamura or Itabashi with a core shaft merely to provide a support to form the cams on and to increase the torsional strength of the shaft. Goi does disclose that the size of this is between 3 mm and almost zero, where *almost zero* is interpreted to be almost zero relative to the entire system in which the core shaft interacts (and note that this can certainly be (much) greater than 3mm). However, while not removing credibility from the previous statement, Goi does lack the specific

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size of the continuous core region. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the the continuous core region between 3mm to almost zero, since the claimed values are merely an optimum or workable range. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

In re claims 7-8, Magnus also suggests assembling the shaft structure in whatever structure is required for varying squeezing contours resulting in varying pumping rates and amounts (see column 4, lines 28-36). Also, Magnus fails to make explicit mention of that the cam segments are offset with respect to one another in such a way that only one cam segment is at a maximum distance from an imaginary line of the shaft and a uniform offset of the cam segments is provided. However, such a structure is a mere rearrangement of parts and it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70 and Magnus discusses rearranging the cams and structuring the eccentric shaft in a manner corresponding to a desired squeezing contour for the purpose of achieving a desired pumping rate and volume (see column 4, lines 28-36). In likewise fashion, the desire to pinch the hose so that a volume can be enclosed in leak-tight manner at the first and last cam segment and the remaining lamellae serve for the reduction in volume or wherein the first and last lamellae are switched as a valve and the remaining lamellae are set in such a way that in any position, at least a narrow gap remains between the walls of the hose acted upon by the lamellae results only in a mere rearrangements of parts. It has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70 and such a rearrangement is suggested by Magnus for the purpose of adjusting the desired

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squeezing contour and therefore, the desired pumping rate and volume (see column 4, lines 28-36).

In re claim 9, see Magnus col. 1 lines 59-62.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Magnus 5,558,507 in view of Itabashi et al (5676192) or Nakamura et al (5778530) or Smith et al (6289764) and further in view of Romanelli et al. 4,755,168. Magnus teaches the invention as claimed and as discussed above but fails to teach the following claimed limitation as taught by Romanelli: a pumping of fluid in two directions for the purpose of performing both drainage and irrigation (Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the structure of Magnus with a pumping of fluid in two directions for the purpose of performing both drainage and irrigation (Abstract).

### ***Response to Arguments***

Applicant's arguments filed have been fully considered but they are not persuasive.

Applicant argues that the U.S.C. 112, second paragraph rejection above is improper on the grounds that claims 1 and 2 do not contradict each other; however examiner disagrees because simply the term "essentially without" is equivalent to "entirely without".

Applicant argues that at various times the references teach away from each other; however, that is not the case because the references teach different modes – they do not teach avoiding a mode, etc.

Applicant argues that since Magnus teaches a concept that is favorable to *assembly* one of ordinary skill in the art would not construct the shaft as a homogenous piece of material; however, examiner states that although not fully relevant, this would in fact favor assembly. Applicant similarly argues that it would not be advantageous to form from a multi-piece element to a single-piece element; however, this could save cost, materials, etc.



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Applicant's argues that there is nonanalogous art combined in the references, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, all of the references are camshafts.

Finally, applicant argues that it would not be obvious to modify the diameter of the continuous core region because it is not a known result-effective variable; however, this is a result-effective variable. Note that there has been a further rejection made on the relevant claims *along with the same rejection from before*.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TODD D. JACOBS whose telephone number is 571-270-5708. The examiner can normally be reached on Monday - Friday, 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/  
Supervisory Patent Examiner, Art Unit  
3746

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